

Razvoj instrumenta za mjerenje zadovoljstva poslom zaposlenika - Empirijska istraživanje na Sveučilištu u Zagrebu

Development of the Instrument for the Measurement of Job Satisfaction of Employees – Empirical Research at the University of Zagreb

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Sažetak: Zaposlenici su ključ uspjeha bilo koje profitne i neprofitne organizacije, te je zbog toga neophodno razviti neki instrument za mjerenje zadovoljstva zaposlenika na Sveučilištu u Zagrebu. Kvaliteta nastavnika je važna dimenzija zadovoljstva visokim obrazovanjem kod studenata. Bez profesionalnih, motiviranih i entuzijastičnih nastavnika i nastavnika zadovoljnih svojim radom upitni su rezultati sustava visokog obrazovanja. Svrha ovog rada je pokazati razvoj takvog instrumenta za mjerenje i pokazati rezultate provedenih empirijskih istraživanja koja su testirala zadovoljstvo poslom zaposlenih na visokim učilištima na Sveučilištu u Zagrebu u Republici Hrvatskoj. Istraživanje se provelo u 2013. godini na četiri fakulteta. Istraživanje je provedeno kao dio projekta koji se odnosi na razvoj integriranog izvješćivanja za visokoškolske ustanove koji je uključivao mjerenje zadovoljstva studenata, financijskih pokazatelja i razvoj poslovnih procesa, a svrha je bila prikazati korisnost podataka dobivenih tim instrumentima u vezi s poboljšanjem obrazovnih procesa visokih učilišta. Rezultati istraživanja pokazuju da su zaposlenici Sveučilišta u Zagrebu općenito zadovoljni s poslom.

Ključne riječi: integrirano izvješćivanje, mjerenje uspješnosti, pokazatelji, zaposlenici, Sveučilište

Abstract: Employees are the key to the success of any profit and non-profit organizations, and because of that, it was essential to develop an instrument for the measurement of job satisfaction of employees at the University of Zagreb. The quality of teachers is an important dimension of satisfaction with higher education among students. Without professional, motivated and enthusiastic teachers and

teachers satisfied with their work, outputs of the higher education system are questionable. The purpose of this paper is to show the development of such a measurement instrument and to show the results of the conducted empirical research, which tested job satisfaction of employees at Higher Education Institutions (HEI) at the University of Zagreb (Croatia). The research was conducted in 2013 on four faculties. The research was conducted as part of a project focused on the development of integrated reporting for HEI, which also included the measurement of the satisfaction of students, financial indicators and the development of business processes, with the aim to show the usefulness of data provided by those instruments in relation to the improvement of educational processes of HEI. The research results indicate that employees of the University of Zagreb are overall satisfied with their jobs.

Keywords: integrated reporting, performance measurement, indicators, employees, University

1 Introduction

Different trends, conditions and assumptions that appear in Croatia and its High Education System (HES) imply the use of various instruments to strengthen the competitiveness of public High Education Institutions (HEIs) in the Croatian Higher Education Area (HEA). HEIs should enable a high-quality study and provide highly educated students who will assure a strong link between the degree of economic development of the country and the percentage of highly educated students within the total population. The increased number of students together with the rise of study quality requirements reflects on the increase of expenditures in the HEA, requiring additional financial resources that due to the current recession and the situation within public finances in Croatia are difficult to be obtained. HEIs within the European Union have funds available to them through different sources with budgets (which make up a large part of the total resources) and tuitions playing an important role. The main source of financing of HES in Croatia is the State budget, which covers funding for salaries and benefits, partly material costs, the necessary level of scientific, artistic and professional work, together with the educational service to ensure the integrity and the necessary standard of higher education. Accordingly, it would be necessary at the national level to determine the criteria for the allocation of state funds and the model of state funding with the appropriate formula for the long-term sustainability of educational activities at HEIs.

The limited budget possibilities in Croatia and the focus on the needs of students means that in order to develop a rational funding formula it is necessary to determine the appropriate performance measurement indicators. The references and needs of students and employers should be used as guidelines in the stakeholder processes on a short and long-term basis. The orientation towards the education plan and teaching processes, as well as towards the employees of HEIs itself means that there should be a possibility of measuring the satisfaction of students, employees and employers through performance measurement indicators. As part of the development of integrated performance measurement indicators for the University of Zagreb the authors conducted an empirical research among the employees at University of Zagreb in order to determine the level of satisfaction with their jobs. We developed a questionnaire that is linked with indicators about the satisfaction of employees as part of integrated reporting for performance measurement at the University of Zagreb and its constituents. Other aspects observed within the integrated reporting were the satisfaction of students, financial indicators, business processes and scientific research indicators that could be used for benchmarking, improving quality and decision making regarding a particular institution.

Employees are the key to the success of any profit and non-profit organizations, and because of that it is clear that the employees of the University of Zagreb are key to the quality of the educational services. The quality of the teachers is an essential aspect of satisfaction with higher education.

Without professional, motivated and enthusiastic teachers, as well as teachers satisfied with their work, the outputs of the higher education system are questionable. According to the internal marketing philosophy there is a high correlation between the satisfaction of teachers and student satisfaction. Simply stated if the teachers are unhappy with certain aspects of their work, unmotivated to work with students or to conduct scientific work needed for the development of their competencies, it is impossible to expect satisfied students, to have accessible teachers for students, to have applicable ways of transferring knowledge and knowledge that teachers are transferring to students. Dissatisfied and unmotivated teachers are not enthusiastic about teaching or about conducting scientific research.

The administration staff is important for providing administrative back-up regarding educational services and the completion of the educational cycle. The above shows that the heads of higher education institutions must be interested in having motivated and satisfied employees and to do everything they can in order to raise and maintain a high level of job satisfaction. Consequently, the system of assessment of the satisfaction of employees should be an integral part of the instrument for monitoring the quality of work of the University. Therefore, the objective of this paper is to show the development of a measurement instrument regarding job satisfaction of employees and to present the results of the empirical research about job satisfaction of employees at Higher Education Institutions (HEIs) at the University of Zagreb (Croatia) obtained through the developed instrument. Additionally, the aim of the paper is to present clearly all the data that can be collected by using that particular research instrument.

2 Literature review

The innovation and the learning perspective or the perspective that answers the question "How do we maintain our ability to introduce change and development for the purpose of achieving the organizational vision" is one of the four perspectives of the Balanced Scorecard model (Kaplan and Norton, 1992; Kaplan and Norton, 1996). This perspective applies to employees when the employees are holders of innovation and learning within an organization, so it is therefore possible to name it the "perspective of the employee." The perspective of the employee is part of the Balanced Scorecard model for two main reasons: (1) due to the role that employees have in today's organizations, and (2) because of the connection between the satisfaction of the employee at the workplace and their work efficiency and therefore the success of the organization. Employees are considered the most significant asset of today's companies, being the basic development resource and the basis of the competitive advantage of nations and organizations (Baird and Meshoulam 198; Becker and Huselid, 1998; Boudreau, 1996; Boudreau, 1997; Gratton et al., 1999, Hamel and Prahalad, 1994; Mayo, 2001; Pfeffer, 1994; Quinn, 1992; Spencer, 1995). The skills and the accumulated knowledge of the employees are considered to be the key for the competitive asset of any nation (Cascio, 1998, p. 15). Simultaneously, organizations today recognize that their competitive advantage is not based on land property, buildings, raw materials, and the technology they have, on the processes carried out, the financial resources available to them or strategy that they use. The companies recognize that their survival, growth and development depend on people who work for them and the interaction and synergy formed by the employees of the organization.

As pointed out by O'Reilly and Pfeffer (2000, p. 1), we live in a world where knowledge (rather than physical capital) is increasingly gaining importance and that is why we need smart people who are able to do great things - increase productivity, produce new products and services, and to do it increasingly faster. People are the largest and most valuable asset that any organization can have, because all that the management plans or fails to implement depends on people (Darling, 1999). In the age of knowledge, it is the people, with their ideas, knowledge and information, that become the most valuable thing a nation or organization has. Therefore, today's investors realize that even during production "materials without human inputs are of little value and that most of the processes that add value to materials are based on knowledge-based services" (Quinn, 1992, p. 48). The concept of having satisfied employees in order to have satisfied clients is highly accepted and developed - both by

scientists and by practitioners - within many well-known and widespread scientific areas such as human resources management, internal communication and internal marketing (Sinčić Ćorić and Pološki Vokić, 2009, p. 88). All of these scientific areas have a common feature and that is that satisfied and motivated employees work better and more and therefore are more conducive to the achievement of organizational goals. This interdependence is visible in Figure 1.

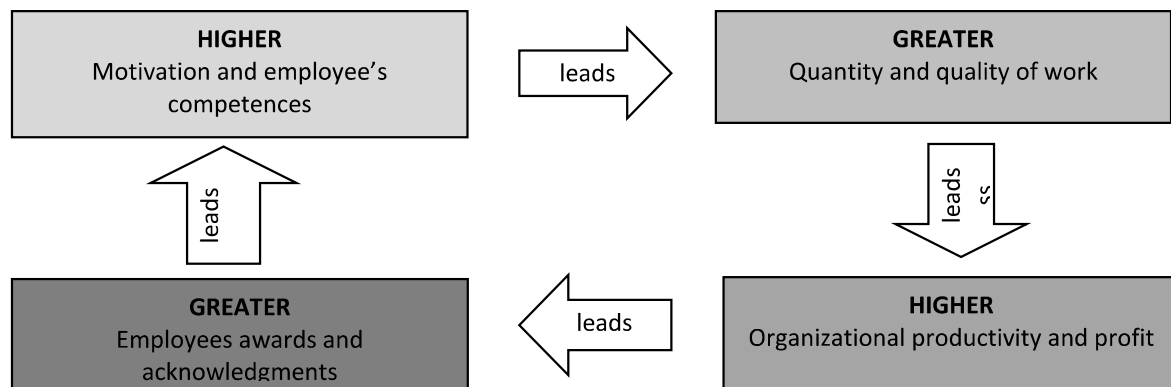


Figure 1 - Interdependence between employees and organizational goals
Source: Bahtijarević-Šiber (1999, p. 24.)

The management of an organization is always interested to know, whether there is, and what is the relationship between employee's satisfaction with work and their loyalty to the organization for which they are working, but also with their behaviour. According to Phillips (1996, p. 182), organizations always had an interest in the satisfaction of employees with their wages, jobs, co-workers, work environment, and the management and promotion opportunities because they believe that a happy employee is a productive employee. For this reason, a research in the field of behavioural sciences was conducted about the relationship between employee attitudes towards work and their personal characteristics (e.g. age, gender, work-family conflict), the characteristics of the work environment (for example, attitudes on discrimination, support of superiors/collaborators) and results (e.g. absenteeism, employee turnover, job performance, customer satisfaction) (Cascio, 2000, p. 139).

It has been proven that "employees who are dissatisfied with their jobs and who are not loyal to their employer are more often absent from work, often late, often leaving the organization and are less focused on meeting customers' needs of those employees whose attitudes are positive" (Cascio, 2000, p. 139). Simply put, scientific research, as well as everyday practice, has unquestionably proven that the negative attitudes of employees in relation to work and the organization, leads to their reduced work performance and consequently a reduction in the overall productivity and success of the organization.

The Workforce Scorecard (WFSC) based on the concept of Balanced Scorecard by Kaplan and Norton, is a very popular tool for evaluating the quality of employees. Huselid, Becker and Beatty (2005) suggest that in order to monitor and improve the value of employees of an organization, the organizations need to observe the following four concepts: (1) the behaviour of managers and employees, (2) the success of the employees, (3) the thinking system of employees and the present organizational culture and (4) the competences of the employees. Perspective of WFSC match the following four questions (Huselid, Becker and Beatty, 2005, p. 4):

1. Do the managers and employees act continuously in a way that will lead to the realization of the strategic goals of the organization? (Perspective behaviour of managers and employees)

2. Do the employees achieve the key strategic objectives of the organization? (Perspective of employee's success)
3. Do the employees understand and accept the strategy of the organization and whether the present organizational culture supports the implementation of the strategy? (Perspective of system thinking of employees and present organizational culture)
4. Are the employees, primarily those key employees, equipped with the skills needed in order to implement the strategy? (The perspective of the employees' competence)

The indicators of the perspective employees are indicators of the quality of people within an organization or the value of the so-called human capital. Human capital is part of the intangible assets and the intellectual capital of an organization that consists of "knowledge, skills and abilities which are important for finding solutions to problems that customers consider important" (Cascio, 2000, p. 10). The same conclusion can be drawn with HEIs and how the satisfaction of employees influences the aspect of satisfaction of the students with high education. The aspect regarding administration and teachers is visible in Figure 2.

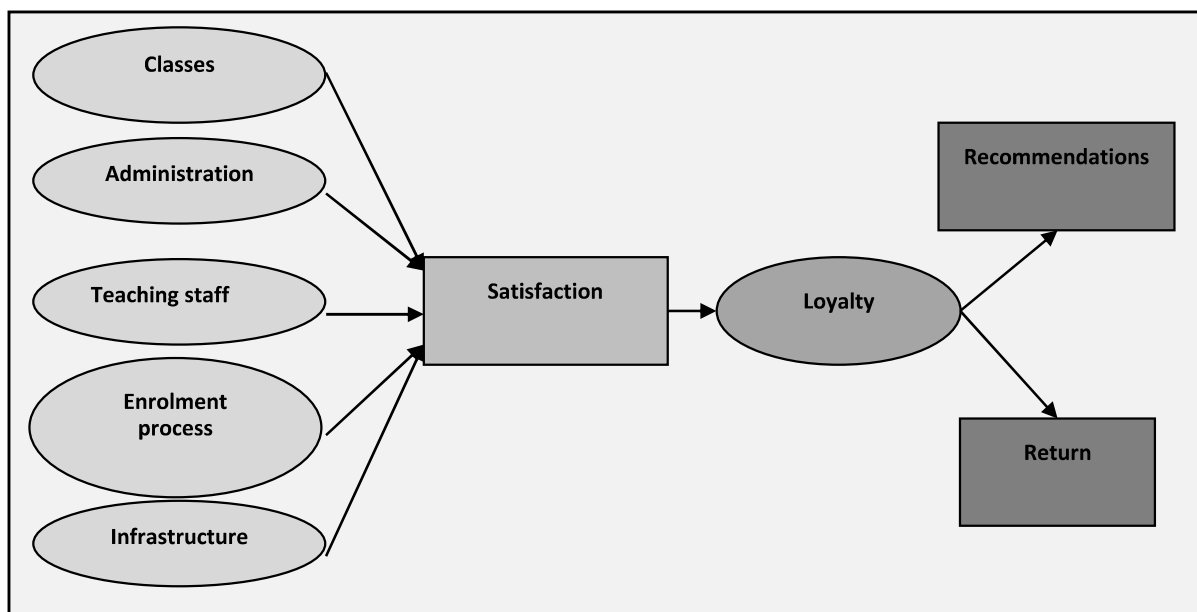


Figure 2 The satisfaction of students with high education
 Source: Navarro, Iglesias and Torres (2005.a, p. 511.)

There are some additional aspects regarding the satisfaction of students with high education influenced by HEIs employees such as communication, consultation and feedback, and the opportunity to comment and to give suggestions (Aldridge i Rowley,1998, p. 201.), the clarity of instructions by teachers, the enthusiasm of teachers, to encourage participation in the classroom, the accuracy of teachers (Cardone, Lado i Rivera, 2001. according to Navarro, Iglesias and Torres, 2005.b, p. 64.), effectiveness of training, quality of service, and focus on students, style of teaching (Elliot i Healy 2001., Harvey 1995., according to Navarro, Iglesias i Torres, 2005.a, p. 508, Hill,1995, p. 17, Wiers-Jenssen, Stensaker i Grøgaard, 2002, p. 188.).

According to LeBlanc and Nguyen (1997, p. 76.) teachers, their appearance, kindness, courtesy, communication and teaching skills, teaching and research results and innovation, as well as the

introduction of changes are very important to students but they also want the administration to be accessible, friendly and polite, capable of solving new problems, and to have knowledge of rules and procedures. So, we can conclude that the satisfaction of HEIs employees is influencing not only student satisfaction, but also the performance of HEI itself. Based on the review of the available literature there are several aspects that determine motivation and satisfaction of employees such as salaries, employee satisfaction with interpersonal relationships (relationships with colleagues or superiors) satisfaction with the style of management leadership, motivational elements, possibilities for further education and the development and promotion opportunities.

2.1 Previously conducted research about job satisfaction at Universities

According to Bruscia, Fallan and Petterson (1998, p.13) job satisfaction reflects on the respondent's reaction to either the job, general job satisfaction or certain aspects of the job. They conducted a research about disciplinary differences related to job satisfaction, self-efficacy, goal commitment and organizational commitment as an assessment of performance indicators. The study was done within Norwegian faculties of nursing, teacher education, engineering and business administration and the response rate was around 45%.

Their paper reveals a positive correlation between organizational commitment and job satisfaction for the total sample of faculty employees (Busch, Fallan and Petterson, 1998, p.13). Regarding global job satisfaction, they have found out that faculty employees in engineering are less satisfied than the other 3 faculties. Employees in nursing and business administration faculties are the most satisfied with their general job situation (Busch, Fallan and Petterson, 1998, p.14).

The employees of business administration faculties are more satisfied with the conditional awarding than other schools, which is related to more academic freedom than other faculties. Faculties of nursing and teacher education have the highest scores regarding the economic compensation for the job (Busch, Fallan and Petterson, 1998, p.15). The employees of faculties of engineering and business administration are more dissatisfied. This can be connected with the perception that engineers and business economists with the same qualifications earn more outside of the college sector (Busch, Fallan and Petterson, 1998, p.15).

According to Fraser and Hodge (2000, p.172-187) gender is also important as an indicator for job satisfaction in HEIs. Their study shows that profiles of satisfied male and female employees at HEIs differ. The male part of the faculty which embrace gender and racial diversity, perceive the organization as fair, is committed to the organization and have intrinsic rewards from their job will most likely experience high job satisfaction. While female employees that are older, search for quality workers and experience intrinsic rewards from their job are likely to experience some job satisfaction (Fraser and Hodge, 2000, p.184.).

Another interesting study was made in Turkey regarding job satisfaction of the academic staff at public Universities (Toker, 2011, p.156-169.). In their study, the researchers showed a moderately high-level of overall job satisfaction with a score of 3.64. Under the intrinsic factor of job satisfaction social status, social service, and the ability utilization items had the highest level of satisfaction among the academic staff. Compensation, supervision-technical, and supervision-human relations within the extrinsic factor had the lowest level of satisfaction

Consequently, the job satisfaction of people working in academia should come from the intrinsic factors present in the job. At the same time, academicians would be expected to be extrinsically motivated by factors such as salary, fringe benefits, and administrative features (Toker, 2011, p.164.).

The findings of the study indicate that there are significant differences between overall job satisfaction and academic titles. Professors have a higher level of job satisfaction as compared to instructors and research assistants. Consequently, professors have the highest level of job satisfaction among all academicians. Among the demographic variables age, the length of service within a university and the length of service within higher education were significantly related to overall job satisfaction. Regarding age groups, 61 years and over have a significantly higher levels of job satisfaction than 21-40 years (Toker, 2011, p.165.).

Marital status and gender are not significantly related to job satisfaction within the current study (Toker, 2011, p.165.). Finally, Toker concludes that job satisfaction is an important matter that needs to be researched further within the academic work life since it is related to performance, productivity, absenteeism, and turnover, while at the same time, academic job satisfaction studies can help university management and teachers to further develop the quality of education (Toker, 2011, p.166.).

Tabassum (2012, p.78-89) conducted a research about interrelations between Quality of Work Life (QWL) dimensions and faculty member job satisfaction within private universities in Bangladesh. This study provides valuable suggestions for private universities of Bangladesh that have a growing interest in attracting and retaining quality faculty members. It shows a statistically significant positive correlation between the dimensions of QWL and faculty members' job satisfaction. The author emphasizes that private university management should be focused on the policy implications based on the concerned issues of QWL improvement (Tabassum, 2012, p.78-89).

The author explains that there is no doubt that an improved QWL can lead to higher level of job satisfaction, which in turn will reduce the faculty member turnover rate that is prevailing in private universities of Bangladesh because a large number of faculty members are acting as assets within those universities. The author believes that they are playing a significant role for economic growth by contributing through their knowledge, skills and efforts. So, transforming the workplace proactively using a combination of well-designed QWL initiatives for the faculty members will yield a competitive advantage as it will increase the job satisfaction of faculty members. He concludes that this in turn will motivate them to perform in a superior way, leading the universities and their stakeholders towards a better future by yielding the expected outcome (Tabassum, 2012, p.78-89).

Using higher education employees as examples also in Taiwan, the authors proposed the improvement priority based on the perspectives of importance and satisfaction, and the IS model theory; faculties, based on their own resources, can determine the improvement strategies and priorities to satisfy actual employee requirements (Chen, Yang, Shiau and Wang, 2006, p.484-500). The authors suggest that for HEIs employees that place an excessive value on their salaries may randomly job-hop to chase higher salaries, affecting school morale. Their study can help education providers to understand the wishes of the teachers, which include financial satisfaction, related welfare and fair promotion systems; the satisfaction of teachers with school's management can benefit both teachers and schools.

3 Research methodology

3.1 Research instrument

As part of the development of the integrated performance measurement indicators for the University of Zagreb, the authors developed a research measurement instrument in 2013 and tested it among employees at University of Zagreb to determine the level of satisfaction with their job. The developed research instrument measured the satisfaction with eight aspects of the job: salaries, co-workers, possibility of promotion, management, nature of work, personal training and development, link between results and awards (conditional awards) and job satisfaction in general. Each of the areas representing the three particles are presented below.

A. Salary

- Q1. I think I am well paid for the work I do.
- Q10. Raises are small and they happen seldom. (* Negative attitude)
- Q17. I am satisfied with the opportunities for a potential increase in wages.

B. Co-workers

- Q2. I like the people I work with.
- Q11. Pleasure to do business with my co-workers.
- Q18. At work, there is too much bickering and quarrelling. (* Negative attitude)

C. Possibility of promotion

- Q3. I am satisfied with the possibilities of promotion.
- Q12. Those who do their job well have a good chance to advance.
- Q19. People here are progressing more slowly than in other organizations. (* Negative attitude)

D. Management

- Q4. My supervisor is quite competent in his/her work.
- Q13. My supervisor was unfair to me. (* Negative attitude)
- Q20. My supervisor does not show enough interest in the feelings of the people whom he/she manages. (* Negative attitude)

E. Nature of Work

- Q5. Sometimes I feel that my job is meaningless. (* Negative attitude)
- Q14. I love doing what I do on the job.
- Q21. I am proud to do this job.

F. Personal training and development

- Q6. My job offers enough opportunity for a successful career development.
- Q15. At work, I have a chance to do what I do best.
- Q22. In the workplace, I do not have an opportunity for personal growth and development. (* Negative attitude)

G. Conditional awards

- Q7. For a job well done I receive appropriate recognition.
- Q9. I do not feel that what I do is appreciated. (* Negative attitude)
- Q23. Not enough reward for those who work here the most. (* Negative attitude)

H. General job satisfaction

- Q8. I feel quite satisfied with their current job.
- Q16. Most of the time I am enthusiastic with my job.
- Q24. My job is obnoxious. (* Negative attitude)

The respondents on a Likert - type scale of 1 to 5 expressed their agreement or disagreement with the particles, where the following scale was used: 1 - strongly disagree, 2 - disagree, 3 - neither agree nor disagree, 4 - mostly agree, 5 - I completely agree.

3.2 Sample characteristics

The job satisfaction of employees at the University of Zagreb was measured on a sample of four constituents of the University: Faculty of Electrical Engineering and Computing, Faculty of Veterinary Medicine, Faculty of Economics and Business and Faculty of Philosophy. The research involved 132 respondents, of which 41 from the Faculty of Electrical Engineering and Computer Science, the Faculty of Veterinary Medicine 18, 26 from the Faculty of Economics and Business and 47 with the Faculty of Philosophy. Respondents are employed in teaching and associate positions and within the administration. The structure is shown in Figure 3.

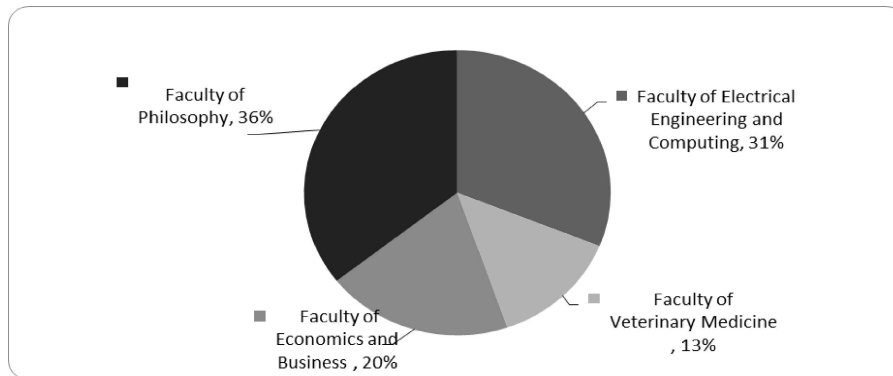


Figure 3 Sample structure
Source: Empirical research (2017)

Of all respondents, 42.4% were male and 53% were female, while 4.5% of respondents did not answer this question. Respondents by gender are differently distributed to HEIs (Table 1).

Table 1 Descriptive statistics about age, working years at HEI and working years at University of Zagreb regarding HEI respondents
Source: Authors (2017)

HEI		Age	Working years at HEI	Working years at University of Zagreb
Faculty of Electrical Engineering and Computing	Average	37,15	13,45	12,38
	N	40	41	41
	Standard deviation	12,05	11,91	11,87
Faculty of Veterinary Medicine	Average	39,06	13,81	11,96
	N	18	18	18
	Standard deviation	10,26	10,59	10,19
Faculty of Economy and Business	Average	35,72	12,34	9,78
	N	25	26	26
	Standard deviation	8,94	7,53	4,76
Faculty of Philosophy	Average	41,09	16,77	13,82
	N	47	47	47
	Standard deviation	11,36	11,75	10,12
Total	Average	38,56	14,46	12,32
	N	130	132	132
	Standard deviation	11,10	10,97	9,94

Most of the male subjects are located at the Faculty of Electrical Engineering and Computing (69.23%). Most of the female subjects are located at the Faculty of Philosophy (72.73%). The average age of respondents was 38.56 years. The average total length of working years for HEIs is 14.46, and the average length of working years at the University of Zagreb is 12.32 years.

To test whether the connection between gender and HEIs respondents is statistically significant, the Chi-square test was conducted. The result of the Chi-square test showed a statistically significant association between gender and Faculty respondents with a 1% probability (chi-square = 15.409, p-value = 0.001), as a result of the fact that at the Faculty of Electrical Engineering and Computing a traditionally male population of students is dominant and therefore later on they have a higher share among the employees.

Differences in age, working years at HEI and working years at the University of Zagreb are not large per HEI (Table 1), and the Kruskal-Wallis H test showed that they were not statistically significant (chi-square = age = 4.843, working years at HEI = 2.785, working years at University of Zagreb = 2.079, p-value = 0.184, 0.426, 0.556).

4 Research results

Table 2 (in appendices) indicates the average value of the particles of job satisfaction for all respondents together. The particles measure the agreement of respondents on a scale of 1 to 5 with claims that gauge the satisfaction of respondents with eight job related areas of satisfaction: salaries, co-workers, possibility of promotion, management, nature of work, personal training and development, the link between results and awards (conditional awards) and job satisfaction in general. Most of the particles express a positive attitude, while the starred particles express a negative attitude. In order to verify that the group particle truly reflects the common assessment of individual areas of job satisfaction, values were calculated with the Cronbach's alpha indicators.

In calculating the Cronbach's alpha indicators, the reciprocals response to particles that express a negative attitude (star) are used. The values of Cronbach's alpha indicators are higher than 0.7 in all areas, except for the "possibility of promotion", which is Cronbach's alpha 0.632. One can therefore conclude that groups of particles reflect a common assessment of certain areas and justify them to analyse the anticipated groups.

In order to interpret the results, we compared average grades with the neutral point of the scale ("Grade 3"). Table 2 shows that the participants in the study express satisfaction in most of the tested aspects. For 17 of the 24 particles on the estimated average have positively oriented particles in the positive end of the scale (more than 3) or on the negative end of the scale for negatively oriented particles (less than 3). Seven particles that indicate dissatisfaction with certain aspects of the job are grouped in subscales of satisfaction with salary, opportunities for promotion, satisfaction with the relationship between results achieved and the awards that follow (conditional remuneration).

In order to get a clearer insight into the results, we calculated the average of each of the eight subscales of job satisfaction. To calculate the total score, negative oriented particles were recoded, so that a higher number indicates a greater job satisfaction.

Decision on calculating the total score on the scale is justified by the fact that the value of Cronbach's alpha indicators was larger than 0.7 for all areas, except for the possibility of promotion, which was just below this level (0.63, for the reliability of all subscale see Table 2). The findings suggest that the particles subscales are homogeneous and that the overall result is relatively reliable and not loaded with error measurements. Average estimates of the individual subscales of the questionnaire on job satisfaction are shown in Table 3.

Table 3 Satisfaction with certain aspects
Source: Authors (2017)

Aspects	Minimum	Maximum	Mean	Std. Deviation
Salary satisfaction	1.00	5.00	2.45	0.92
Co-workers satisfaction	1.33	5.00	3.56	0.80
Satisfaction with possibility of promotion	1.00	4.67	2.83	0.91
Satisfaction with management	1.00	5.00	3.79	1.04
Satisfaction with nature of work	1.00	5.00	3.93	0.86
Satisfaction with personal training and development	1.00	5.00	3.53	0.94
Satisfaction with conditional awards	1.00	5.00	2.74	0.98
General job satisfaction	1.00	5.00	3.82	0.83

The survey results indicate that employees tested at 4 HEIs on the average express satisfaction with the nature of work, general job satisfaction, management and co-workers. The average assessments on these scales are all above 3.50, and the highest satisfaction expressed is with the nature of work or with work tasks that employees deal with at the University. In accordance with the descriptive statistics by individual particles, as problematic aspects of the job, the respondents assessed the salary, promotion possibilities and conditioned rewarding. For all these aspects, the average value can be found in the negative part of the scale, and the worst is the estimated salary satisfaction.

To gain a better insight into the aspects of the response to particular aspects of job satisfaction we have analysed the satisfaction with certain aspects of the job depending on the gender of the participants, Faculty and the total working years. Table 4 shows the satisfaction of respondents with particular aspects of job, by the faculties and by the gender. As can be seen, the total respondents were moderately satisfied with their job at the University (average value = 3.345).

In doing so, they are dissatisfied with three aspects of the job (the average value less than 3.00) - salary (average of 2,487), possibilities for promotion (average value = 2.801) and conditional awards (average value = 2.712), and moderately satisfied with other aspects of the job. Respondents are satisfied the most (values close to 4.00) with three aspects - management (average value = 3.803), the nature of work (average value = 3.925) and general job satisfaction (average value = 3.807).

The greatest satisfaction is expressed with the aspect "nature of work". That is not surprising because the job at HEIs is highly specific and it assumes a high level of intrinsic motivation for teaching and scientific work. Also, not surprising, the greatest dissatisfaction is with the salary and conditioned rewarding because it is known that the salaries at faculties are less than the salary of the employees in the "real sector" and that at the University equal pay ("regimentation") is assigned for different workload.

Furthermore, Table 4 (in appendices) indicates some differences in overall job satisfaction and the satisfaction of certain aspects of the job with regard to gender. The differences are noticeable in the absolute level of satisfaction with the salary, the possibilities for promotion, personal training and development. With all those aspects, male employees are more satisfied. In addition, it is noticeable that there are absolute differences in the attitudes of male and female employees with regard to the Faculty where they work, except at Faculty of Electrical Engineering and Computing. Thus, the attitudes of male and female employees differ in 6 aspects and the total job satisfaction at Faculty of Veterinary Medicine and Faculty of Economics and Business. At the Faculty of Philosophy 5 aspects and the total job satisfaction differ with male and female employees.

5 Conclusion

The paper objective is to present the developed measurement instrument for job satisfaction of the employees at University of Zagreb, and the data that can be obtained through its usage. This was achieved through the empirical research at 4 HEIs within the University of Zagreb. Research results indicate that the employees of the University are satisfied with their jobs. Participants generally expressed satisfaction with the social (management and staff) and intrinsic aspects of the job (the nature of the work, the possibility of training and development). Our results indicate that employees perceive as problematic the extrinsic aspects of the job at the University relating to remuneration and the advancement in the workplace. To gain a better insight into the response to particular aspects of job satisfaction we have analysed the satisfaction of certain features of the job depending on the gender of the participants, the Faculty and the total working years. The most important factor turned out to be gender. Analysis showed that there are significant differences depending on gender regarding the satisfaction with their salary, the possibility for promotion and personal training and development. In all cases, the male respondents perceived their job satisfaction higher than the female respondents did, but this can probably be attributed to the conflict between work and family life. The institution, where the respondents are employed, are significantly determining the satisfaction with co-workers and conditional rewarding, which is probably attributable to the differences in the organizational climate. Finally, the work experience of respondents was significantly associated with the possibility of promotion (positive) and the satisfaction with management (negative), and this can be explained by the changes in the perception of organizational characteristics that occur with the increasing work and life experience. However, it should be noted that these findings are based on a sample of participants and that for a more precise conclusion the analysis should be conducted more extensively on a larger sample of employees at the University of Zagreb.

After examining the results of the individual particles, it can be concluded that the current system of rewarding is not being perceived by employees as motivating, and it is believed that remuneration does not follow the stated efforts and achievements. Accordingly, the main recommendation that follows from a research about job satisfaction is a more strongly binding remuneration and promotion at the University with the results achieved at work.

As part of the integrated reporting of HEIs that also includes the measurement instrument regarding the satisfaction of students with HEIs, financial indicators and development of business processes, this presented questionnaire can provide a wide range of data for the further direction of HEIs regarding employees and educational process. Although the research was done in 2013 which allows for the results today to potentially be different, the authors wanted to show that the measurement instrument could easily be used in HEIs in order to measure the satisfaction of employees which represents as an important segment within the educational process.

The limitations of this research are visible through the relatively small number of researched Faculties and the relatively small number of employees that responded to the measurement instruments. With a larger sample of Faculties and a higher number of participating employees, the statistical results of the research as well as the derived conclusions would be more even more accurate.

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Appendices

Table 2 Average values of job satisfaction particles – all respondents
Source: Authors (2017)

	N	Minimum	Maximum	Average	Standard deviation	Cronbach's alpha
A. Salary						
Q1. I think I am well paid for the work I do.	132	1	5	3,18	1,222	0,731
Q10. Raises are small and they happen seldom. (*)	132	1	5	3,98	1,115	
Q17. I am satisfied with opportunities for potential increase in wages.	132	1	5	2,28	1,093	
B. Co-workers						
Q2. I like the people I work with.	132	1	5	3,75	0,841	0,772
Q11. Pleasure to do business with my co-workers.	131	2	5	3,75	0,817	
Q18. At work, there is too much bickering and quarrelling. (*)	132	1	5	2,77	1,233	
C. Possibility of promotion						
Q3. I am satisfied with the possibilities of promotion.	132	1	5	2,93	1,249	0,632
Q12. Those who do their job well have a good chance to advance.	132	1	5	2,77	1,184	
Q19. People here are progressing more slowly than in other organizations. (*)	130	1	5	3,20	1,157	
D. Management						
Q4. My supervisor is quite competent in his/her work.	131	1	5	3,74	1,187	0,872
Q13. My supervisor was unfair to me. (*)	131	1	5	1,93	1,032	
Q20. My supervisor does not show enough interest in the feelings of the people whom he/she manages. (*)	131	1	5	2,43	1,277	
E. Nature of Work						
Q5. Sometimes I feel that my job is meaningless. (*)	131	1	5	2,26	1,093	0,787
Q14. I love doing what I do on the job.	132	1	5	4,17	0,878	
Q21. I am proud to do this job.	132	1	5	3,89	1,089	
F. Personal training and development						
Q6. My job offers enough opportunity for a successful career development.	132	1	5	3,29	1,328	0,703
Q15. At work, I have a chance to do what I do best.	132	1	5	3,73	0,995	

	N	Minimum	Maximum	Average	Standard deviation	Cronbach's alpha
Q22. In the workplace, I do not have an opportunity for personal growth and development. (*)	132	1	5	2,43	1,186	
G. Conditional awards						
Q7. For a job well done I receive appropriate recognition.	132	1	5	2,81	1,192	0,733
Q9. I do not feel that what I do is appreciated. (*)	132	1	5	2,88	1,211	
Q23. Not enough reward for those who work here the most. (*)	132	1	5	3,71	1,233	
H. General job satisfaction						
Q8. I feel quite satisfied with the current job.	132	1	5	3,68	0,968	0,818
Q16. Most of the time I am enthusiastic about my job.	132	1	5	3,26	1,053	
Q24. My job is obnoxious. (*)	132	1	5	1,48	0,878	

Table 4 Satisfaction of employees with particular aspects of job satisfaction and general job satisfaction regarding gender and Faculty
Source: Authors (2017)

Faculty	Gender		Salary	Co-workers	Possibility for promotion	Management	Nature of work	Personal training and development	Conditional awards	General job satisfaction	Total job satisfaction	
Faculty of Electrical Engineering and Computing	Male	Average	2,716	3,962	2,949	4,115	3,852	3,864	3,086	3,704	3,597	
		N	27	26	26	26	27	27	27	27	27	25
		St.Dev.	0,880	0,818	0,815	1,020	1,079	0,791	0,968	0,912	0,912	0,547
	Female	Average	1,861	3,528	2,917	3,833	4,194	3,750	2,917	3,833	3,833	3,354
		N	12	12	12	12	12	12	12	12	12	12
		St.Dev.	0,731	0,948	0,911	1,150	0,771	0,900	0,944	0,810	0,810	0,631
	Total	Average	2,453	3,825	2,939	4,026	3,957	3,829	3,034	3,744	3,744	3,518
N		39	38	38	38	39	39	39	39	39	37	
St.Dev.		0,919	0,872	0,834	1,055	0,998	0,816	0,951	0,873	0,873	0,578	
Faculty of Veterinary Medicine	Male	Average	2,095	3,000	2,810	3,524	4,190	3,381	2,667	3,762	3,179	
		N	7	7	7	7	7	7	7	7	7	
		St.Dev.	0,600	0,745	1,034	1,345	0,742	0,989	1,054	0,833	0,833	0,749
	Female	Average	2,533	3,400	3,500	3,867	4,074	3,600	3,000	4,400	4,400	3,639
		N	10	10	10	10	9	10	10	10	10	9
		St.Dev.	0,905	0,886	0,724	1,229	0,703	0,979	0,786	0,466	0,466	0,429
	Total	Average	2,353	3,235	3,216	3,725	4,125	3,510	2,863	4,137	4,137	3,438
N		17	17	17	17	16	17	17	17	17	16	
St.Dev.		0,803	0,831	0,905	1,249	0,698	0,958	0,890	0,698	0,698	0,615	
Faculty of Economics and Business	Male	Average	3,133	2,833	2,800	3,767	4,067	3,733	2,367	4,100	3,350	
		N	10	10	10	10	10	10	10	10	10	
		St.Dev.	1,009	0,892	0,724	1,248	0,953	0,940	0,909	0,876	0,876	0,719
	Female	Average	2,458	3,521	2,378	3,458	3,813	3,083	2,146	3,833	3,833	3,069
		N	16	16	15	16	16	16	16	16	16	15
		St.Dev.	0,851	0,750	1,015	0,851	0,709	1,177	0,996	0,531	0,531	0,615
	Total	Average	2,718	3,256	2,547	3,577	3,910	3,333	2,231	3,936	3,936	3,182
N		26	26	25	26	26	26	26	26	26	25	
St.Dev.		0,955	0,861	0,917	1,009	0,803	1,120	0,951	0,680	0,680	0,659	
Faculty of	Male	Average	3,000	3,667	3,306	3,417	3,944	3,806	2,833	3,778	3,469	
		N	12	12	12	12	12	12	12	12	12	

Philosophy		St.Dev.	0,620	0,765	0,784	0,933	0,874	0,611	0,927	0,701	0,378
	Female	Average	2,219	3,708	2,427	3,906	3,792	3,198	2,583	3,615	3,181
		N	32	32	32	32	32	32	32	32	32
		St.Dev.	0,801	0,585	0,864	0,928	0,854	0,923	0,863	0,977	0,538
	Total	Average	2,432	3,697	2,667	3,773	3,833	3,364	2,652	3,659	3,259
		N	44	44	44	44	44	44	44	44	44
Total		St.Dev.	0,828	0,630	0,923	0,945	0,852	0,886	0,877	0,905	0,512
	Male	Average	2,774	3,570	2,982	3,824	3,952	3,768	2,851	3,798	3,468
		N	56	55	55	55	56	56	56	56	54
		St.Dev.	0,862	0,918	0,820	1,100	0,963	0,804	0,972	0,845	0,581
	Female	Average	2,257	3,590	2,657	3,786	3,903	3,324	2,600	3,814	3,248
		N	70	70	69	70	69	70	70	70	68
		St.Dev.	0,829	0,732	0,957	0,993	0,790	1,001	0,928	0,831	0,576
	Total	Average	2,487	3,581	2,801	3,803	3,925	3,521	2,712	3,807	3,345
		N	126	125	124	125	125	126	126	126	122
		St.Dev.	0,879	0,815	0,910	1,037	0,868	0,941	0,953	0,834	0,586